Appl. No. 10/616,636
Amdt. dated March 23, 2007
Reply to Office Action of November 24, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (Currently Amended) A switching method, for use in a <u>VLAN (virtual local area network)</u> including at least one WDM optical path, comprising:
deriving a VLAN ID from a received packet;
deriving a wavelength ID value related to a carrier wavelength of the received packet; and
using at least both the VLAN ID value and the wavelength ID value for making an optical VLAN forwarding decision for the packet to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame.

2.   (Original) The method of claim 1, including:
managing a forwarding database storing packet records including received and forwarded values for VLAN ID, and carrier wavelength; and
said step of using further including searching the database for data forwarding information, and forwarding the packet in response to a result of said searching.

3.   (Original) The method of claim 1, including:
parsing a received packet and determining the presence of a valid VLAN ID field; and
performing said two steps of deriving and said step of using only when there is a valid VLAN ID field.

4.   (Original) The method of claim 3, including:
managing a forwarding database storing packet records including received and forwarded values for VLAN ID, and carrier wavelength; and

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said step of using further including searching the database for data forwarding
information, and forwarding the packet in response to a result of said searching.

5.   (Original) The method of claim 1, including:

parsing a received packet and determining the presence of a valid VLAN ID field;

determining if a set maximum VLAN ID capacity has been reached; and

performing said two steps of deriving and said step of using only when the maximum

VLAN ID capacity has been reached.

6.   (Original) The method of claim 5, including:

managing a forwarding database storing packet records including received and

forwarded values for VLAN ID, and carrier wavelength; and

said step of using further including searching the database for data forwarding

information, and forwarding the packet in response to a result of said searching.

7.   (Currently Amended) A computer readable media ~~having~~ stored with computer

readable data instructions that are executable for physically implementing the method of claim 1.

8.   (Currently Amended) A computer readable media ~~having~~ stored with computer

readable data instructions that are executable for physically implementing the method of claim 2.

Claims 9-10. (Canceled)

11.   (Currently Amended) A network node switching device for use in a VLAN

(virtual local area network), comprising:

means for switching a received packet at least from or to WDM optical paths,

means for deriving a VLAN ID from the received packet;

means for assigning a wavelength ID to the packet; and

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means for making a forwarding decision for the packet based upon at least both a VLAN ID value and a wavelength ID value to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame.

12. (Original) The network node switching device of claim 11, wherein said means for assigning performs its function only when a forwarding database indicates a threshold value of used VLAN IDs has been reached.

13. (Original) The network node switching device of claim 11, wherein said means for assigning performs its function only when a valid VLAN ID is present in the received packet.

14. (Original) The network node switching device of claim 11, further including:
means for managing a forwarding database storing packet records including received and forwarded values for VLAN ID and carrier wavelength.

15. (Currently Amended) A switch for forwarding a packet having a header with a VLAN ID, for use in controlling a link in a data transmission network to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame, comprising:
a port to receive the packet;
a port to forward the packet;
at least one of said ports having optical paths with WDM;
a parsing engine to derive a VLAN ID value based upon a VLAN field in the received packet;
a computer; and
a computer readable media having stored with computer readable data instructions that are executable by said computer for physically implementing the method of claim 1.

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16.   (Currently Amended) A switch for forwarding a packet having a header with a VLAN ID, for use in controlling a link in a data transmission network to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame, comprising:

a port to receive the packet;

a port to forward the packet;

at least one of said ports having optical paths with WDM;

a parsing engine to derive a VLAN ID value based upon a VLAN field in the received packet;

a computer; and

a computer readable media ~~having~~ stored with computer readable data instructions that are executable by said computer for physically implementing the method of claim 2.

17.   (Currently Amended) A switch for forwarding a packet having a header with a VLAN ID, for use in controlling a link in a data transmission network to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame, comprising:

a port to receive the packet;

a port to forward the packet;

at least one of said ports having optical paths with WDM;

a parsing engine to derive a VLAN ID value based upon a VLAN field in the received packet;

a computer; and

a computer readable media ~~having~~ stored with computer readable data instructions that are executable by said computer for physically implementing the method of claim 3.

18.   (Currently Amended) A switch for forwarding a packet having a header with a VLAN ID, for use in controlling a link in a data transmission network to provide a VLAN

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identifying capacity greater than that provided solely by a VLAN ID carried by a frame, comprising:

a port to receive the packet;

a port to forward the packet;

at least one of said ports having optical paths with WDM;

a parsing engine to derive a VLAN ID value based upon a VLAN field in the received packet;

a computer; and

a computer readable media ~~having~~ stored with computer readable data instructions that are executable by said computer for physically implementing the method of claim 4.

19.   (Currently Amended) A switch for forwarding a packet having a header with a VLAN ID, for use in controlling a link in a data transmission network to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame, comprising:

a port to receive the packet;

a port to forward the packet;

at least one of said ports having optical paths with WDM;

a parsing engine to derive a VLAN ID value based upon a VLAN field in the received packet;

a computer; and

a computer readable media ~~having~~ stored with computer readable data instructions that are executable by said computer for physically implementing the method of claim 5.

20.   (Currently Amended) A switch for forwarding a packet having a header with a VLAN ID, for use in controlling a link in a data transmission network to provide a VLAN identifying capacity greater than that provided solely by a VLAN ID carried by a frame, comprising:

a port to receive the packet;

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a port to forward the packet;

at least one of said ports having optical paths with WDM;

a parsing engine to derive a VLAN ID value based upon a VLAN field in the received packet;

a computer; and

a computer readable media ~~having~~ stored with computer readable data instructions that are executable by said computer for physically implementing the method of claim 6.

21.   (Original) A method of transmitting information, comprising:

receiving first and second VLAN (Virtual Local Area Network) tagged frames with both frames having the same VLAN ID (Identification);

transmitting the first frame over an optical fiber with a first wavelength and of a WDM (Wavelength Division Multiplexing) network; and

transmitting the second frame over the optical fiber with a second wavelength different from the first wavelength and over the WDM (Wavelength Division Multiplexing) network.